Charleston Charter School for Math and Science
Technology Plan
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Introduction

Mission Statement

The Mission of the Charleston Charter School for Math and Science is to educate students for success in college and careers by providing an innovative learning environment that is academically excellent, developmentally responsive and socially equitable.

With this mission, in accordance with the South Carolina Charter Schools Act, the Charleston Charter School for Math and Science will improve student learning, increase learning opportunities for students, encourage the use of a variety of productive teaching methods, establish new forms of accountability for schools, create new professional opportunities for teachers, including the opportunity to be responsible for the learning program at the school site, and assist South Carolina in reaching academic excellence.

Background

CCSMS opened August 19, 2008 to a diverse group of 183 sixth through ninth grade students from 60 public and private schools in the Charleston area. The school is housed in 29 portables located on the grounds of Rivers Middle School. The school community has the use of the Gym and Cafeteria. The school expanded by 1 grade for the 2009-2010 school year resulting in a total of 297 students. Each year 1 grade will be added until 2015 when the projected enrollment will be 480 students. To accommodate the additional students and needed lab classes 16 mobile classrooms were added. These additional classrooms required the expansion of the wireless network already in place.

Demographics

Current Student Enrollment by grade, gender and race

Grade	Enrollment	Male	Female	White	African-American	Other
10	53	24	29	24	27	2
9	74	46	28	37	31	6
8	62	32	30	30	37	2
7	68	33	35	25	39	4
6	40	21	19	18	19	3

School Status

Grades: Grades 6 – 10 (to grades 6 – 12 in 2012)
Number of students: 297 (480 in 2012)
Free and reduced lunch: 127
Number of classrooms: 24

Staff:

Administrative	5
Support	3
Guidance	2
Full-time faculty	22
Part-time faculty	4

Current Technology Status

- Money from a State and Federal Planning and Implementation Grant purchased 100 laptop computers, 135 desktop computers, 35 printers, 25 SmartBoards, Apple Server, 1 copying machine, 78 iTouch and T-1 access.

- Staff development in the area of instructional technology has been one-on-one. Smartboard, Moodle, GradeQuick and iTouch workshops are planned.

- Parents are kept abreast of the school's activities through Edline, a subscription service provided by the school.

- Grades are posted to Grade Quick and are available to both parents and students.

- Teachers and staff communicate through Google Apps for Education. Teachers, students and parents are required to sign our Acceptable Use Policy (AUP).

- Students have access to email through Google Apps.

- The school meets CIPA standards with Bess Filtering software.

Technology has radically changed the methods by which teachers teach and students learn and plays a more central part in a school with a highly concentrated Math and Science curricula. Educators stress that both disciplines require extra preparation especially for students to succeed in college and find better jobs. This document discusses the specific steps CCSMS will take to further enhance student learning and student achievement through the use of technology.

Technology As A Tool

CCSMS is committed to using technology to support academic achievement, realize instructional goals and strengthen academic programs. CCSMS views technology as a collection of vital tools that support teaching and learning in the classroom throughout the course of the school day and not a separate subject to

be taught in isolation. CCSMS strives to offer students and staff tools to access information and communicate effectively. These tools are the means by which students broaden their learning skills and knowledge.

In addition, the use of technology allows teachers to customize instruction, address individual learning styles, and adapt instructional materials to a wide range of ability levels. Effective integration of technology results in increased opportunities for students to participate in real world math and science applications and promotes learning outside of the regular school day.

Goals, Strategies & Objectives

The South Carolina Technology Plan is used as a framework for CCSMS's technology goals.

1. Learners and Their Environment

CCSMS will use research proven strategies to provide an environment conducive to students meeting and exceeding technological literacy standards by the end of the eighth grade in order to raise their academic achievement level.

Objective	Strategy
Ensure infrastructure will support academic environment.	A. Determine the number of computers and peripherals needed according to student projections. B. Determine technologies needed to support planned Math and Science courses. C. Maintain email system
Provide relevant teaching and learning resources based on student data and academic goals.	A. Analyze student performance through MAP scores, report card to identify technology resources needed to support learning objectives. B. Review SC Virtual School courses appropriate for CCSMS students. C. Ensure access to DISCUS, SC Online, Knowitall and other initiatives offered through the DOE.
The network infrastructure is secure and provides bandwidth that supports communication, data collection and	A. Maintain T1 line. B. Ensure that filtering system meets

CCSMS

distribution and online learning.	state and federal guidelines.
CCSMS will have access to qualified technical personnel to repair and maintain infrastructure.	Review technical support contract to determine feasibility of full time technical personnel.

2. Professional Capacity

CCSMS will provide curriculum development and professional development to increase the competency of its staff and teachers so that research-proven strategies and the effective integration of instructional technology systems can be used to increase student achievement.

Objective	Strategy
Investigate the level of technological proficiencies of faculty and staff members.	A. Administer Proviso survey to faculty and staff. B. Schedule workshops based on survey results.
CCSMS will provide information and training in technology integration so that teachers can use research-based best practices throughout the curriculum.	A. Research available professional development opportunities focusing on technology integration and disseminate information to teachers and staff. B. Research available professional development opportunities focused on aligning state content standards with state technology standards and disseminate information to teachers and staff. C. Research available conferences and workshops focusing on technology integration and disseminate information to teachers and staff.
On time staff development will be offered for newly purchased hardware or software.	Staff development will be scheduled within 2 weeks of hardware/software arrival.
CCSMS will provide onsite technology leadership whose focus is to ensure that technology is making a significant	Hire technology specialist to assist with basic technology skills and the integration of technology into

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instructional and administrative impact for students, teachers and administrator.	classroom instruction.
CCSMS will develop a "proficiency" measure and certification system for staff in areas of basic maintenance, implementation, and use	This will be done trough an IT vendor and the school technology team.

3. Instructional Capacity

CCSMS will use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

Objectives	Strategies
Students will use multimedia software for large and small group presentations.	A. Purchase hardware that meets multimedia standards. B. Purchase multimedia software.
Students will independently use Rosetta Stone software for language study.	A. Identify students. B. Identify teacher mentors. C. Purchase software.
Each learning station will be equipped with an Electric Light Machine Organization (ELMO) or other document imaging system to present multidimensional objects.	Purchase ELMOs
Each department/grade level will have a Smart Airliner which allows students to interact from their seats.	Purchase Smart Airliners

4. Community Connections

CCSMS will increase student achievement through the use of technology, including assistive technology by maximizing community involvement and community partnerships.

Objectives	Strategies
CCSMS will provide parental access to school events, report cards and be able to communicate with faculty and staff.	Create survey to determine effectiveness of Edline portal.
CCSMS will provide email to staff,	Use of Google Apps

faculty and students.	
Alternative methods of instruction will be available to students unable to attend or complete regular coursework.	A. Students will enroll in the SC Virtual School. B. Educators will enroll in online professional education courses.

5. Support Capacity

CCSMS will expand and support technology resources to assist educators and learners in meeting the state academic standards.

CCSMS will create a safe learning environment for students	Filtering software
Provide real time technical support for infrastructure (See RFP)	Combine IT vendor services with full-time technology support person on staff
Planning for future needs	Principal appoints faculty technology committees, which works with IT vendor and community to research and set direction for technology needs.
Better access to student information systems Data Central and Power User)	Work with CCSD IT department
Implement cell phone use among staff for intra-and extra-campus communication	Staff is given a monthly stipend for additional cell phone services.

NEEDS ASSESSMENT

Technical Support: CCSMS has a Technology team which works closely with the current IT vendor to determine needs beyond the present. An RFP for services for 2009 – 2010 is attached

Facility and infrastructure: CCSMS operates in 29 portables, a cafeteria and a gym. All hardware and software described below has been purchased during the first year of operation. Presently, the school has a campus-wide wireless and wired network with servers located in an IT room. Cisco routers are in place and the network is filtered. Each classroom has a SmartBoard and projector as well as networked printer and one or two desktop computers. Each faculty member has a laptop computer and there are four sets (20 each) of student laptops, one of which is dedicated to Project Lead the Way.

Software includes Microsoft Office and other educational software. The school's web portal is hosted by Edline and the students and staff use Google Apps for documents, calendars, and email. Teachers use an online gradebook, and parents and students have access to grades and other student information. The planning team is currently exploring direction for future hardware and software. CCSMS accesses the student information services system (SASI) via a VPN to CCSD, somewhat limiting the school's data-handling and reporting capabilities. Current survey data reveals that there is a high rate of dissatisfaction with Edline and Gradebook. As Charleston County School District is in process of switching from SASI to Powerschool, CCSMS is evaluating options to maximize the use of Powerschool by adding PowerTeacher and PowerClassroom to address the needs of teachers and parents having an improved tool for communication. The board is also exploring other options for web portal hosting that is less expensive and offers improved effectiveness.

Appendix A: Budget

Budget		
Technical Component	Funding Source	Cost
Technical Support/Helpdesk	P&I Grant/Local	$36,000.00
SmartBoards/Projectors	CCSD	$19,200.00
Laptop computers	P&I Grant/Local	$120,000.00
Productivity Software	P&I Grant/Local	$12,000.00
Apple Server	P&I Grant/Local	$10,000.00
Other software	P&I Grant/Local	$12,000.00
Printers	P&I Grant/Local/CCSD	$4,000.00
Edline webportal	P&I Grant/Local	$4,000.00
Graphing calculators	P&I Grant/Local	$3,250.00
Wireless tablets	P&I Grant/Local	$4,200.00
Document cameras	P&I Grant/Local	$6,000.00
Professional development	P&I Grant/local	$5,000.00
Science lab technology	P&I Grant/Local	$10,000.00
		$245,650.00

APPENDIX B

Charleston County School District Technology Acceptable Use Policy GBEBD

1. Purpose
To establish the Board's vision and the basic structure for the acceptable use of technology resources in the Charleston County School District and CCSMS.

2. Acceptable Use
It is the policy of the Charleston County School District and CCSMS that use of district information technology shall be lawful and ethical, shall be for district educational or business purposes, shall conform to district technology and security standards, and shall comply with all applicable board policies and regulations. This policy constitutes an Internet safety policy within the meaning

of the Children's Internet Protection Act (47 U.S.C. 254). This policy shall be implemented through the following acceptable use standards for information technology.

3. Applicability
The following acceptable use standards for information technology (standards) are applicable to every employee, contractor, student or other persons who use, accesses or otherwise interacts with Charleston County School District information technology system.

4. Scope
These standards shall include the following Charleston County School District information technology systems:
- Telephones, cell phones, PCS devices, radios, pagers
- Computer systems, hardware, software, personal digital assistants (PDAs), wired and wireless networks
- E-mail, web, intranet, and internet services
- Video systems including distance learning and ETV systems
- Application systems including, but not limited to, district financial systems, human resource systems and student information systems
- Other information technology or electronic communication systems

5. Acceptable use standards for information technology and CCSMS
Access to and use of Charleston County School District information technology systems is subject to the following standards. By accessing or using applicable systems, the user accepts without limitation or qualification the terms and conditions or these standards.
   5.1 Use shall be lawful and ethical
- Unlawful, threatening, harassing, libelous, defamatory, obscene or offensive use is prohibited.
- Access to visual depictions that may be obscene, pornographic or harmful to minors is prohibited.
- Using false or deceptive identity is prohibited.
- Unauthorized access to, or alteration or disruption of, a communications or computer system is prohibited
- Copyrighted material which may include software, test, music, graphic or other media.
  o Display of the copyright symbol is not required for protection under the Copyright Act.
  o Permission of the author or copyright owner is required for copying, downloading, or distribution.
  o Presence on the web does not mean an item is in public domain.

- o Permission for software use shall be evidence by license. 'Shrink-wrap' licenses shall be complied with. Records of licenses shall be maintained. Copying or distribution shall comply with "Fair Use" provisions of the Copyright Act when applicable.
- Use must comply with all applicable Charleston County School District policies, regulations and directives.

5.2 Use shall be for district educational or business purposes.
- Commercial, personal, political and religious uses are not allowed. For example, "My car is for sale" is not permitted on the district web or email.
- Personal calls on desktop or "wireline" phones are limited to incidental local calls.
- Personal long distance calls and personal cell phone calls are reimbursable to the Charleston County School District
- Personal email is not permitted on Charleston County School District or CCSMS email systems.

5.3 Technology products and use shall conform to district standards
- Hardware and software to be installed on district systems must be school approved.
- Websites and pages created or hosted on district systems must be school approved.
- Technology and communications systems must be used in a secure manner
  - o Passwords are not to be shared, posted, or disclosed
  - o Only authorized software is to be loaded on district devices
  - o Anti-virus scans are to be made on any software, executable code, scripts, devices to be connected to district networks
  - o Personally identifiable information on individuals including students which may be protected by law or considered confidential is not to be disclosed

6. Conditions of Use
Charleston County School District and CCSMS operates technology protection measures to protect against access through school computers to material that is obscene, pornographic, or harmful to minors.

Users are cautioned that such technology protection measures are not considered 100% effective. Use of school computers by minors to access the Internet shall be supervised at all times to comply with the standards of this policy.

Employee and student use of school electronic communications and computer systems shall be filtered and may be monitored, logged, disclosed, deleted, or terminated by the district.

Employees and students have no expectation of privacy in use of school information technology and electronic communications.

Employees have a duty to protect district information and technology resources entrusted to their use.

Employees shall report violations of these standards to the school.

Violations of this policy and these standards by employees may be cause for revocation of use privileges and for disciplinary action.

CCSMS may change these standards without prior notice when it deems such changes to be in its best interest.

7. Disclaimers
No warranties for the accuracy, quality, functionality or availability of technology and communications are expressed or implied by this policy and these standards.

CCSMS assumes no responsibility or liability for accuracy, integrity, quality or acceptability of information or content of non-school technology including, but not limited to, non-school websites which may have interconnecting links with school websites.

Users are cautioned to use care due when assessing non-school information technology resources.

Legal references:
   A. Federal law:
         a. 47 U.S.C. Section 254(h) – Children's Internet Protection Act
         b. The Digital Millennium Copyright Act of 1998, Section 512 – Limitations on liability relating to material online
         c. 17 U.S.C. Section 101, et seq. – Copyright Act
         d. 18 U.S.C. Section 1030 – Computer Fraud and Abuse Act of 1986, as amended
         e. 18 U.S.C. Section 2510 – Electronic Communications Privacy Act of 1986

   B. S.C. Code of Laws, 1976, as amended:
         a. Section 16-3-850 – Encountering child pornography while processing film or working on a computer

b. Sections 16-16-10, et seq. Computer Crime Act.

Appendix C: CCSMS Technology Policy

Acceptable use

- E-mail is to be used only for exchange of appropriate school-related information. (Students may not access non-CCSMS e-mail accounts.)
- The Internet is to be used for academic research and as a means of obtaining needed information. The Internet offers access to information that may be inappropriate; the school makes every effort to block or regulate access to such information; however, it is the student's responsibility for using the Internet appropriately.
- Although school computers are to be used for school-related activities, they are not to become a social gathering place; generally, there should be one student to a single computer unless approved by a staff member.
- Computers designated for faculty or staff may be used by a student only with specific permissions and supervision of the faculty or staff member.
- Computer settings may be changed only with the consent and supervision of the school computer support staff.

Unacceptable (prohibited) use

- Computer games
- Use of computers and digital equipment for recording of any material without the consent of all who are being recorded
- Accessing, possessing, or downloading inappropriate or objectionable material
- Sending, soliciting, or intentionally viewing sexually-oriented messages or images
- Writing, soliciting, sending, possessing, printing, saving, or forwarding offensive or harassing statements to external or internal recipients
- Installing or using unauthorized applications, software, or hardware on CCSMS computer systems.
- Hacking or otherwise accessing another's files or using another's password
- The inappropriate use of any electronic device, including digital and electronic devices on the CCSMS campus, regardless of ownership
- Dissemination or printing of copyrighted materials (including articles and software) in violation of copyright laws
- Operating a business or soliciting money
- Gambling or engaging in any other activity in violation of local, state or federal law
- Forgery of messages
- Any activity that significantly prevents or inhibits the conduct of CCSMS academic work
- Any illegal or potentially illegal use or activity related to computer use.

Practical and safe practices with technology

- Develop and use good judgment.
- Inform a teacher immediately if somebody makes an inappropriate comment to you via the Internet or email. Never answer messages from strangers who contact you over the Internet,

and never offer information of any kind about you or your family. Never arrange to meet with strangers who have or may attempt to contact you via the Internet.

- Be careful not to access, transmit, or possess material that is profane, abusive, harassing or otherwise questionable. Do not threaten any inappropriate acts, even if you are joking.

- Properly identify the source of material incorporated in your own work; do not plagiarize. Dissemination or printing of copyrighted materials (including articles and software) is a violation of copyright laws.

- CCSMS resources are not for use in any commercial activities, gambling or political lobbying.

- Maintain your privacy. Users are responsible for their own actions and words as well as for their own account. Never share passwords, use another student's school network account, or use the password belonging to someone else.

- Always be polite and respectful to people with whom you are communicating. Use correct wording, grammar, and spelling – even as a learning experience.

- Violation of these guidelines may lead to disciplinary action and loss of computer privileges as deemed appropriate by your teachers, the computer support staff, and the principal.

Appendix D: RFP for IT Support Services

Charleston Charter School for Math and Science, located at

1002 King Street, Charleston, SC 29403 (843-819-8933)

is seeking proposals for services to maintain, support, and provide additional implementation for a school-wide computer network, computers, printers, and other computer infrastructure.

The school

CCSMS is a public charter school, which opened in August 2008. The school presently serves almost 200 students in grades 6 – 9. A grade will be added each year until the school serves some 480 students in grades 6 – 12. The school presently has approximately 20 staff members, and is housed in 12 portables, a gymnasium, and a cafeteria. The school looks to move into a renovated Rivers Middle/High School building in two to four years. A campus map is attached.

Present infrastructure

The school now has a school-wide wireless network with wired drops in each classroom and office. A server is housed in the cafeteria. There are approximately 100 laptop computers (four classroom sets as well as laptops for full-time staff members) and some 15 desktop computers. Each classroom has a SmartBoard and an attached projector as well as a networked laser printer. All printers are on the school network.

Computers are a mix of **Windows-based PC's** as well as **Apple MacBooks**. Software includes Microsoft Office and other educational software. All computers were purchased after July 2008. One classroom set used in Project Lead the Way Engineering and Biomedical uses Autodesk and other PLTW software. The school has a web portal provided through Edline and email and other services through Google Apps. Access to the student information system is presently provided through a VPN.

The majority of the computers were purchased with 3-year service agreements with the manufacturers.

Nature of services

Support

The vendor will provide ongoing technical support for all software and hardware through both a Helpdesk as well as on-site support. For software and hardware covered by OEM support agreements, the vendor will call the OEM support center to address issues. While a Helpdesk should be available (8:00 AM – 8:00 PM) seven days a week, the vendor should recognize that users are professionals with limited time. The vendor should state in the proposal the response time when the Helpdesk is contacted. CCSMS is soliciting solutions that will provide sufficient support as well help staff members become self-sufficient users. As the vendor provides support, the vendor should work closely with the staff member in providing the solution.

CCSMS will consider proposals for part-time on-site support. This may consist of a part time employee of CCSMS or the vendor. This person will provide triage for immediate needs as well as provide the training as described above. This person may possibly act as a resource to staff members for SASI, Google Apps, and other productivity tools used by the school. This support will include maintenance of the CCSMS network and school filter.

Creative solutions are sought to the problem of maintaining a state-of-the-art computer infrastructure in a forward-thinking school.

Planning

The vendor will provide on-going advice in planning for future technology use. The vendor will provide representative(s) to the school technology team, either through an on-site employee or other vendor employee. This planning will comprise selection of appropriate uses of technology as well as design of solutions and purchase of hardware and software.

Implementation

The vendor will act as the purchasing agent for the school and will serve as installation manager or agent for all new equipment.

Other services

The vendor will provide ongoing back up services for all systems and data, including imaging of computers as well as off-site back up of the network computers, and data.

Fee structure

CCSMS will consider a flat monthly and an hourly fee structure as well as a mixture of these structures. This proposal does not include the cost of hardware, software, or other equipment.

Time line

CCSMS board will determine if the bid will go out for a contract, of if the direction will include creation of a new position for a technology specialist as a permanent

member of the faculty. This decision will be made by April 30, 2010. Should the board elect to utilize an outside vendor, the contract will be yearly beginning July, 2010.

The contract will be awarded on (July Board meeting)

Bids must be received in the school office no later than noon, May 24, 2010.

A pre-bid meeting will be held at the school on May 12, 2010 at 4:00 PM.

Interested Vendor/Technology Staffs may arrange to visit the school and view the present infrastructure by calling the school (843-720-3085). Such visits may be made during the first week of May 4:30 PM.

Proposal

The proposal should include a narrative describing the services to be provided and how they will be provided. A proposed budget should also be included.

The vendor should also describe previous work on going and/or completed which would indicate their ability to provide services of this scope and nature. Contact information for previous clients (three) should be provided. The names of staff members, their roles, and a brief description of pertinent background information will be required. All contractors working on the CCSMS campus must pass a background check through SLED paid for by the vendor.